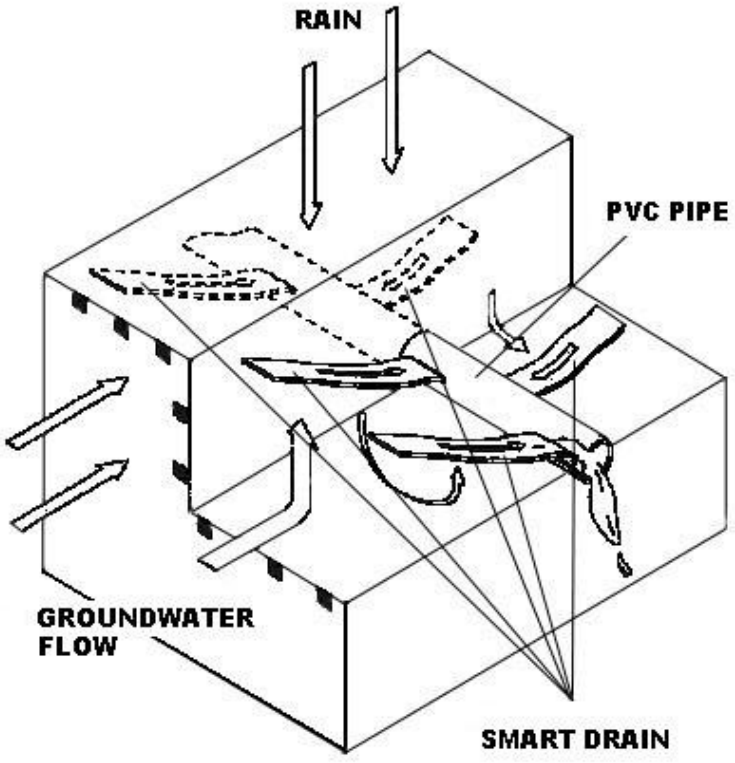
SMART DRAIN

ADVANCED MICRO SIPHON DRAIN BELT

INSTALLATION INSTRUCTIONS



FOR HORIZONTAL INSTALLATIONS OF THE SMART DRAIN SUBSURFACE DRAINAGE SYSTEM

GENERAL GUIDELINES

1. Smart Drain is ALWAYS laid with its inlet side facing downward. LAYING SMART DRAIN WITH ITS INLET SIDE FACING UPWARDS WILL RESULT IN CLOGGING.

2. Alway cut Smart Drain with a sharp razor. Scissors tear at the material and can smear the micro siphon outlets.

2. To create a siphon effect, the Smart Drain end that enters into the collection pipe must always be lower than the rest of the belt. We recommend a minimum of 4 inches of drop into the collection pipe.

3. The Smart Drain end that does not enter the collection pipe must be sealed with duct tape or glue. This ensures that particulates will not enter into the micro siphons from this side.

4. Do not lay Smart Drain directly on top of mud. Always lay it on a bed of coarse drainage sand. Placing Smart Drain directly on top of mud can cause clogging and decreased performance.

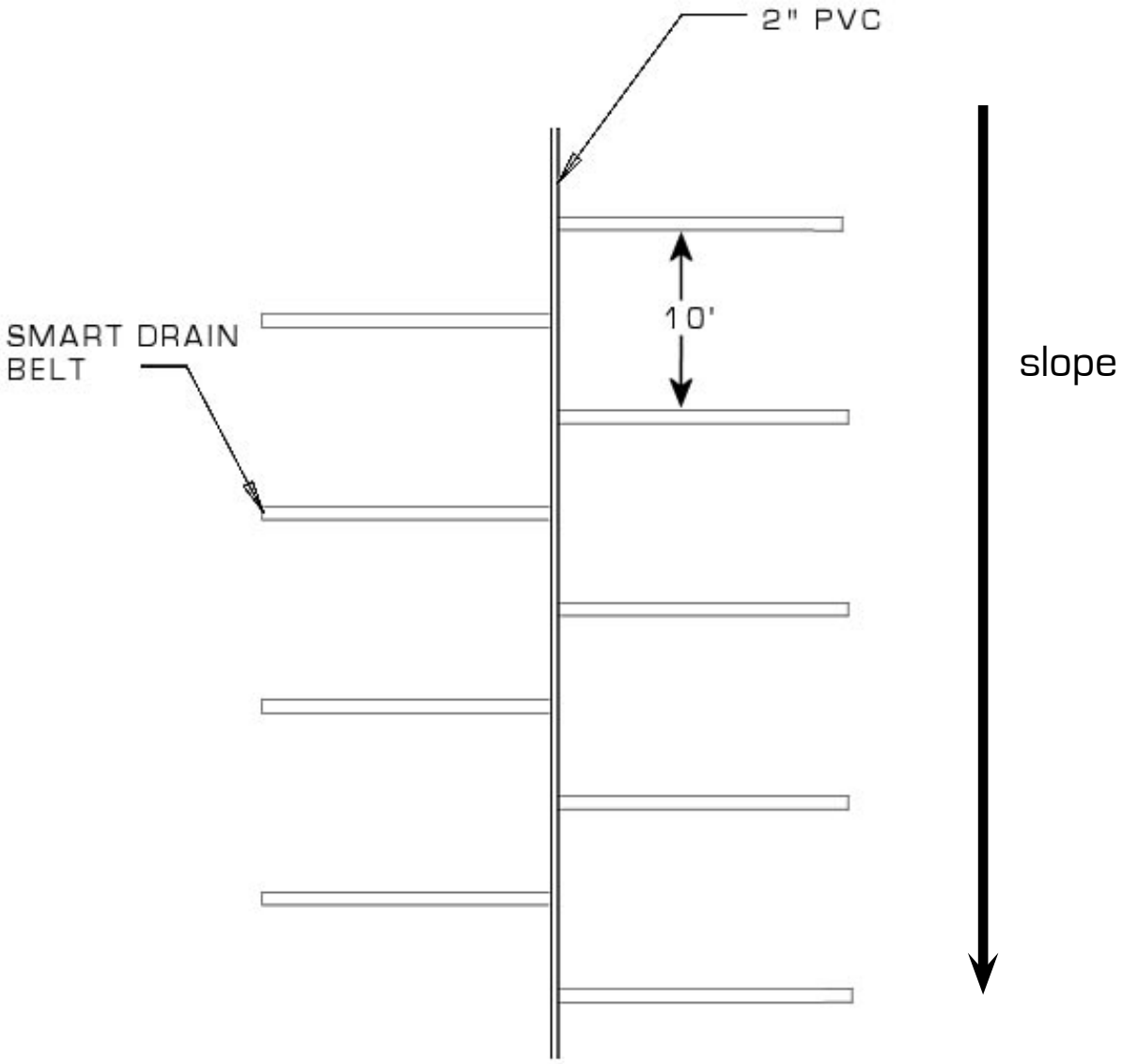
5. Always lay Smart Drain at at least a 1% grade (3-5% recommended). Make sure that the Sand layer is compacted and will not settle. A good way of compacting sand is to wet it. As a general rule, the higher the elevation of the Smart Drain belting, the better the performance.

6. Always use coarse (.5-2mm) and clean drainage sand. Fine and dirty sand mixtures will lead to decreased and slower performance.

(Sieve specification - Everything passing the #10 sieve and retained on the #40 sieve)

SYSTEM LAYOUT

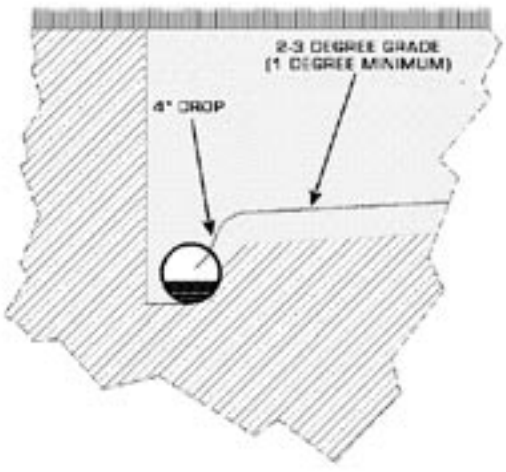
Smart Drain is laid out much like conventional systems. For surface drainage and most subsurface drainage, we recommend laying Smart Drain on alternating 5 foot centers like the diagram below. It is always good practice to concentrate Smart Drain in very saturated low areas to target problem areas. For very wet problem areas, shorten the centers to 3 foot alternating spacing. This will ensure fast and efficient drainage.

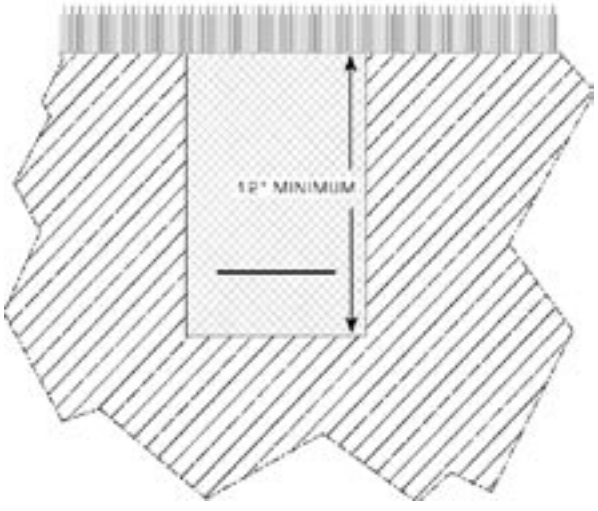


TRENCHING

1. Trenching PVC pipe trenches:
   - Trench PVC trench first, then dig trenches for the Smart Drain belts.
   - Trench only as wide as the PVC pipe (for 2” pipe trench 2” wide).
   - Trench at least a 1 degree drop for this trench.
   - Make sure that the bottom of this trench is a minimum of 4” below the bottom depth of the Smart Drain trenches.
   - Sections of pipe that do not have Smart Drain connected to them should be backfilled with the excavated soil.

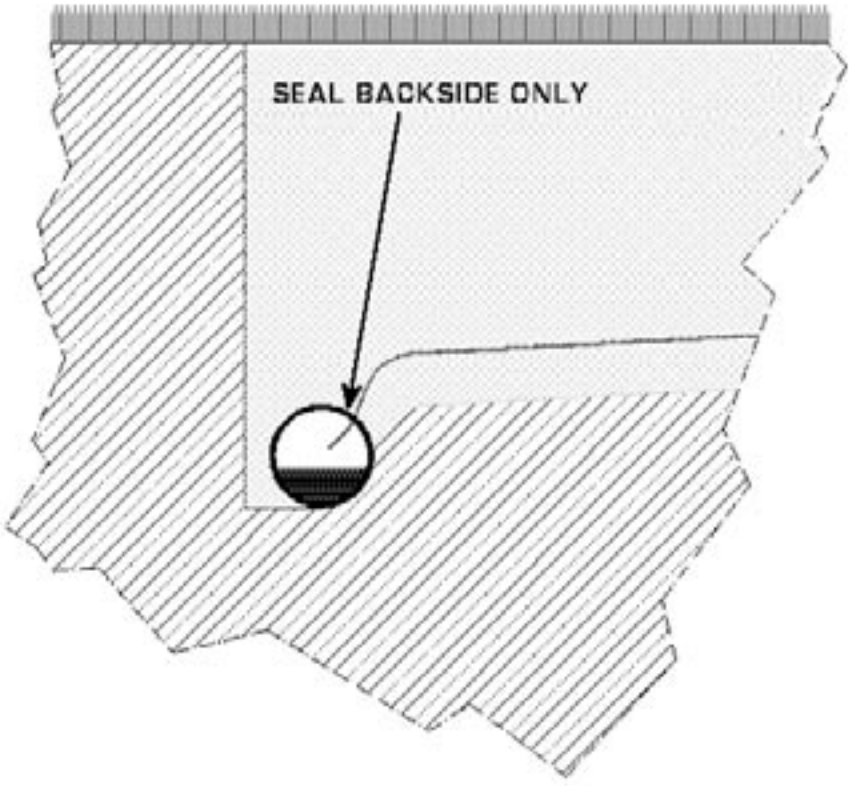
2. Trenching Smart Drain trenches:
   - Trench at least 12” wide (this gives room on the sides for the water to get around and into the drain belt).
   - Trench at least 12” deep. The deeper the trench, the better the drainage.
   - Lay 1-2” of course drainage sand on the bottom of this trench, then lay the Smart Drain over top this at a 3-5 degree grade.
   - Fill to the top of the trenches with sand, fill at least the top 6 inches with a sand/peat mix (80% sand, 20% peat) if you want to grow grass on top. (Smart Drain recommends seeding instead of sodding, sod can have a clay base that hampers drainage).





Connecting Drain Belt to PVC Pipe

First, using a circular hand grinder with a 1/16” wheel, cut an 8 inch slot. Position the pipe so the slots are at a 45 degree angle of elevation. Then insert the Smart Drain belt into the pipe (for a 2” pipe insert belt 1” into the pipe). Then, using PVC cement, seal the back side (smooth side) of the Smart Drain where it intersects with the PVC. Also seal any extra space at the sides of the slot. Then seal the other end of the belt with either PVC cement or duct tape (this will prevent sediment from entering the backside of the belt).



Tip: When cutting the slots to insert the Smart Drain Belts, draw a guide line down one side of the pipe to ensure the slots you cut stay in line with the others.

FOR FURTHER
QUESTIONS
PLEASE CALL
410-381-2390